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ИНТЕГРАЦИЯ КАЗАХСТАНСКОЙ АРХИТЕКТУРЫ В МЕЖДУНАРОДНОЕ ПРОСТРАНСТВО НА ОСНОВЕ НОВЫХ ТЕХНОЛОГИЙ

Аннотация. В данной статье рассматривается как сегодня среди профессионалов-архитекторов все более популярны исследования, направленные на изучение и развитие технологий в архитектуре. Какова роль цифровых технологий в архитектуре? Можно ли сказать, что архитектура, созданная с помощью цифровых технологий, автоматически становится цифровой? Границы этих понятий размыты, все понимают их по-своему. Поэтому целесообразно определить цифровую архитектуру и предложить классификацию ее возможных направлений. Концепция современного дома включает в себя не только дизайн интерьера, грамотно организованное внутреннее пространство и наличие разнообразных бытовых приборов. Полный дом - это, прежде всего, комфортная среда обитания, которая позволяет вам наслаждаться уютным отдыхом в вашем любимом доме. В результате инженерное оборудование квартир и коттеджей неуклонно усложняется, а количество устройств, участвующих в формировании этой

среды, растет. Неудобно и небезопасно управлять всеми системами с хостом. Интегрированная система управления «Умный дом» может выполнять всю рутинную работу по решению этой проблемы, оставляя человека только принятие основных, определяющих решений.

Ключевые слова: умный дом, цифровые технологии, архитектура, интегрированное управление.

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INTEGRATION OF KAZAKHSTAN ARCHITECTURE INTO THE INTERNATIONAL SPACE ON THE BASIS OF NEW TECHNOLOGIES

Abstract. *In this article is considered how today among professionals-architects research is increasingly popular, aimed at studying and developing technologies in architecture. What is the role of digital technology in architecture? Is it possible to say that the architecture created with the help of digital technologies automatically becomes digital? The boundaries of these concepts are blurred, everyone understands them in their own way. Therefore, it is expedient to define a digital architecture and propose a classification of its possible directions. The concept of a modern house includes not only interior design, competently organized interior space and the availability of a variety of household appliances. A full house is, above all, a comfortable living environment that allows you to enjoy a cozy rest*

of your beloved home. As a result, the engineering equipment of apartments and cottages is steadily becoming more complicated, and the number of devices participating in the formation of this environment is growing. It is inconvenient and unsafe to manage all systems with the host. Integrated management system "Smart House" can take all the routine work to solve this problem, leaving the person only the adoption of the main, determining decisions.

Key words: *Smart House, digital technology, architecture, integrated management.*

Today among professionals-architects, research aimed at studying and developing technologies in architecture is becoming increasingly popular. What is the role of digital technology in architecture? Is it possible to say that the architecture created with the help of digital technologies automatically becomes digital? The boundaries of these concepts are blurred, everyone understands them in his own way. Therefore, it is expedient to define the digital architecture and propose a classification of its possible directions.

Four categories were taken as a basis, meaningful for the definition of digital architecture: Issue (the architect's ownership of the digital-virtual architecture flow), Concept, Form, Technology, considered in the article by Yevgeny Khilkevich "Virtual architecture: an attempt systematization ". In our opinion, this approach allows us to approach the definition of the digital architecture quite accurately, but for a more detailed analysis of the concept of "digital architecture" it is necessary to determine the hierarchy of these criteria and clarify their characteristics.

First of all, the Issue category is not significant for referring the project to a particular stream, because, firstly, not every author positions himself as a representative of one or another direction, and secondly, at this stage of the architecture development it is impossible to draw a clear framework between the directions . Therefore, for the definition, we propose to rely only on the categories "idea", "technology", "form". So, the idea is understood as the leading design, the constructive principle of various types of activity, under technology - technological

design methods, means of realization and functioning of the object, under the form - geometric forms of space and their spatial characteristics.

The most obvious examples of the use of digital technologies in architecture are smart house and smart city systems.

The concept of a modern house includes not only interior design, competently organized interior space and the availability of a variety of household appliances. A full house is, above all, a comfortable living environment that allows you to enjoy a cozy rest of your beloved home. As a result, the engineering equipment of apartments and cottages is steadily becoming more complicated, and the number of devices participating in the formation of this environment is growing. It is inconvenient and unsafe to manage all systems with the host. Integrated management system "Smart House" can take all the routine work to solve this problem, leaving the person only the adoption of the main, determining decisions.

Systems for integration into Smart House:

- **Lighting**

can take into account the time of day, sunset / sunrise, information about illumination in the room and on the street, movement and presence of a person. Light scene "Guests" allows you to include several groups of lamps in the living room at full brightness, and the scene "I'm going out" turns off all the lights in the house right away;

- **Climate**

It is controlled on the basis of data from temperature and humidity sensors inside and outside the premises with the help of heating systems, air conditioning, exhaust fan and

outdoor air supply, floor heating system, air humidifiers and other devices;

- **Security Systems**

include visual control of the object at a distance, a video surveillance system, an imitation of presence inside and outside the dwelling, a warning about entering the room, protection against fire, water and gas leaks;

- Curtains, blinds, gates, awnings

are controlled both by pushbutton switches and automatically, using information about the illumination and temperature. The rollers on the windows will be automatically lowered if the room is armed;

- Pool

maintaining the microclimate in the aquarium;

- Comfort

security of housing inside and outside full automation of all processes remote and stationary control of all systems at home control of all automation of the house "from one remote control" automation and control of all processes high degree of autonomy duplication of control over all systems manually [1].

The accumulation of these "smart houses" compiles the city, which represents the highest sample of culture with developed construction and architecture as a whole.

For the first time seriously about the concept of Smart City began talking in the 90's, when they realized that the future is development in the context of the IT sector. It is interesting that in the first place Smart City was considered as an opportunity to protect the environment from the harmful influence of a person. It is clear that at first the idea needed to be popularized in order to interest the state, investors and ordinary citizens, as the technologies were still too imperfect. Twenty years have passed and today the Smart city is a reality.

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investors and ordinary citizens, as the technologies were still too imperfect. Twenty years have passed and today the Smart city is a reality.

A smart city must:

- To regulate traffic;
- To help you find parking;
- To turn on street lighting;
- To provide emergency telephones;
- To create a platform for the urban population to work together.

In Kazakhstan there are also examples of the introduction of a smart city system.

November 30, 2006 at the joint session of the city government of Aktau city with the participation of majors of all levels the concept of the architectural project "Aktau-City" was approved. the perspective development of the city of Aktau is determined by the desire of the Republic of Kazakhstan to join the list of the 50 most developed countries of the world, as well as to ensure the policy of accelerated economic growth in the light of the Head of State's message to the people of Kazakhstan in the forecast period, related to the growth of oil production, the creation of a large industrial complex, restoration and further the development of the construction complex, the improvement of the education and healthcare system, as well as the development of the tourism, recreation and entertainment industry.

"The project is based on the experience of construction carried out in the United Arab Emirates and examples of urban development in developed European countries. Leading engineering and engineering companies such as "Millennium" and "Saraya" are involved in the design and preparation of the master plan" said B. Tuganbaev.

Next on the list is G4 City. One of the most ambitious investment projects is housing construction.

The project for the construction of satellite cities from Almaty to Kapshagay was developed in 2006, soon after the authorities decided to concentrate on the right

coast of the Kapshagay reservoir a good half of the gambling establishments of the republic.

Officially, the beginning of construction work was announced seven times - in 2007, 2008, 2010, 2011, 2012, 2013 and 2017.

Also, other cities take up the idea of realizing the cities of the future. According to the Minister of Information and Communications Dauren Abayev, one of the main indicators of the state program Digital Kazakhstan is the development of Smart City in the five largest cities of the country - Smart Astana, Smart Karaganda, Smart Ontystuk, Smart Almaty, Smart Aktobe” [2].

In conclusion, it should be noted that the world of architecture has a close relationship with the economy. The economics of architectural design belongs to the field of applied science, which by its status is designed to analyze, prove and search for feasible options and rational directions in architecture and urban planning. Therefore, it is possible to believe that architecture in a certain sense forms an economy, and architecture creates economic value.

It is not necessary to guess what profits smart cities will bring, because we have a very good opportunity to determine the approximate yield by the example of the recently forged EXPO-2017 (115 countries and 22 international organizations participated, the exhibition was visited by 3 977 545 people) [3].

Despite the fact that the goals of these spheres are different, in many respects they come into contact with each other. After all, the construction of a new site gives a lot of areas for payback and profit.

- Workplaces for construction;
- Entrepreneurship (Orders for small and medium businesses);
- Taxes;
- Tourism;
- Transformation of the transport system;
- Because this is a smart city, energy costs and environmental costs are reduced.

Thus, a smart city is not just a technologically well-equipped metropolis, but first of all a city that meets the main challenges of our time, also acting as an economic platform.

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